

## Patent Abstracts of Japan

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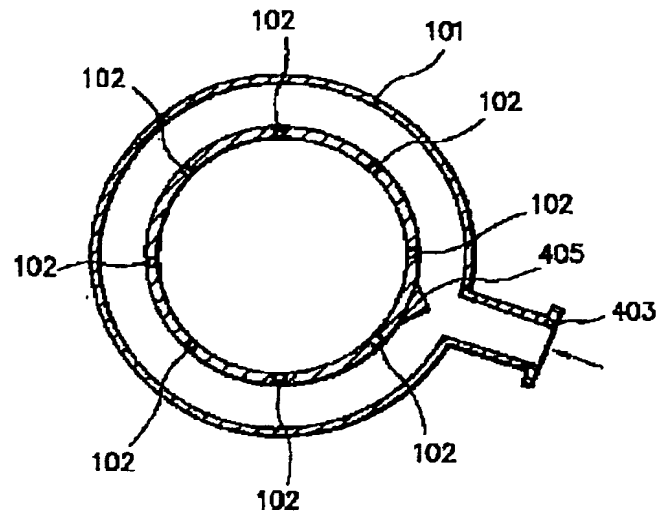
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TITLE : MICROWAVE INTRODUCING METHOD  
AND PLASMA PROCESSING METHOD



**ABSTRACT :** PROBLEM TO BE SOLVED: To improve microwave radiation intensity and the equalization and efficiency of generated plasma by forming a structure wherein a microwave introduced from a microwave power source through an endless annular waveguide is distributed in two directions by the use of a distribution block installed on the inside wall surface of the waveguide used to deliver it to a plasma generation chamber and is hence propagated toward both the sides of the waveguide.

**SOLUTION:** A microwave introduced from a microwave introducing part 403 connected vertically to a cylindrical waveguide 101 formed of stainless steel or the like of which inside wall is plated with copper and silver in the form of two layers is delivered to a plasma generation chamber from multiple slots 102 formed in the inside thereof. The slots 102 are formed at positions of the central body of a strong electric field generated by the interference between the microwaves distributed in the two directions by a distribution block 405 inside the cylindrical waveguide 101 and their length is set to an optimum value peculiar to the inside circumference and inside wave length of the waveguide 101. Thereby, a uniform microwave is introduced. In addition, a magnetic field generation means is preferably formed in order to improve plasma density.

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